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February 27, 2001

VIA FACSIMILE 0141-703-308-6743

5 pages total

Examiner Khai Tran  
U. S. Patent and Trademark Office  
Washington DC 20231  
USA

RE: US Patent Application Ser. No. 09/324,515  
CELLULAR TELEPHONY SEARCHER

Our Ref.: 1068/5 air

Dear Examiner Tran,

Attached please find a draft response to the pending office action in the matter of the above-referenced patent application.

Early next week, I will contact you to set up a teleconference among yourself, myself and our client, to discuss this response.

Very truly yours,



Dr. Alan Rosenthal  
DR. MARK FRIEDMAN LTD.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Applicant:	§	
	§	
DOTAN SOKOLOV ET AL.	§	
	§	
Serial No.: 009/324,515	§	
	§	
Filed: June 3, 1999	§	Group Art Unit: 2731
	§	
For: CELLULAR TELEPHONY	§	Attorney
SEARCHER	§	Docket: 1068/5
	§	
Examiner: K. Tran	§	

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**DRAFT RESPONSE****DRAFT**

Sir:

This is in response to the United States Patent and Trademark Office Action mailed December 5, 2000, which response is being made on or before March 5, 2001 and for which no extension fees are due.

**REMARKS**

Reconsideration of the above-identified patent application in view of the amendments above and the remarks following is respectfully requested.

Claims 1-23 are in this case. Claims 1, 4 and 5 have been rejected under § 102(a). Claims 2 and 3 have been objected to. Claims 6-23 have been allowed.

The claims before the Examiner are directed toward a cellular telephony searcher and toward a method by which mobile stations of a cellular telephony network identify multipath channels to use to communicate with base stations. In particular, the searcher includes a plurality of correlators for correlating a received

signal with a pseudonoise sequence, an input mechanism for inputting the pseudonoise sequence into the correlators with different delays, and a delay management mechanism for initializing and changing the delays. For each correlator, the change applied to that correlator's delay depends only on the output of that correlator.

#### **§ 102(a) Rejections - Fenton et al. '064**

The Examiner has rejected claims 1, 4 and 5 under § 102(a) as being anticipated by Fenton et al., U. S. Patent No. 5,809,064 (henceforth, "Fenton et al. '064"). The Examiner's rejection is respectfully traversed.

Fenton et al. '064 teach a receiver for pseudorandom noise signals such as are transmitted by GPS satellites. Each channel 22 of the receiver uses PRN code generator 230 and two correlators 240 for acquiring and tracking the signal from a corresponding satellite. The delays, with which the pseudorandom code from PRN code generator 230 is supplied to correlators 240 by flip-flops 251, are determined by P and L clock signals from P-comparator 226<sub>p</sub> and L-comparator 226<sub>l</sub> of synchronizer 220. Correlators 240 are used in either "(early,late)" mode or in "(punctual,early-late)" mode, as determined by switch 256. Acquisition is done in (early,late) mode. Tracking is done in (punctual,early-late) mode. In either mode,

...carrier and code drift is detected by determining the difference in the outputs of the correlators 240<sub>a</sub> and 240<sub>b</sub>. When a difference is detected, the synchronizer 220 is corrected by adjusting the internal values in its counters 222, 224 or 226... (column 10 lines 38-43; emphasis added))

For example, in (early,late) mode, the early/late power measurement

$$I_{Ek}^2 Q_{Ek}^2 - I_{Lk}^2 Q_{Lk}^2$$

(column 12 line 5) is used by processor 16 to adjust counters 222, 224 and 226. In (punctual,early-late) mode, the dot-product discriminator

$$I_{E-L,k}I_{Pk}-Q_{E-L,k}Q_{Pk}$$

(column 12 line 11) is used by processor 16 to adjust counters 222, 224 and 226. In either case, the delay, with which the pseudorandom code from PRN code generator 230 is supplied to either correlators 240, depends on the outputs of both correlators 240.

The present invention, as recited in claim 1, is similar to the receiver of Fenton et al. '064 inasmuch as the present invention includes a plurality of correlators, an input mechanism (analogous to flip-flops 250 and 251) to input a pseudonoise sequence to the correlators with different respective delays, and a delay management mechanism analogous to processor 16 and comparators 226p and 226l for initializing and changing the delays. The crucial difference between the present invention, as recited in claim 1, and the receiver of Fenton et al. '064 is that in the present invention, the change in the delay that is applied to the pseudonoise sequence for any specific correlator depends only on the output of that correlator, and is independent of the outputs of any of the other correlators. This is in contrast to the receiver of Fenton et al. '064, in which the change in the delay that is applied to the pseudonoise sequence for either correlator 240 depends on the outputs of both correlators 240. Thus, the present invention, as recited in claim 1, is not anticipated by Fenton et al. '064.

not claimed

Furthermore, the present invention, as recited in claim 1, is not obvious from Fenton et al. '064. There is neither a hint nor a suggestion in Fenton et al. '064 of any utility whatsoever to changing the delay, with which pseudonoise code is provided to

one of a plurality of correlators, in accordance with only the output of that correlator, irrespective of the outputs of the other correlators.

With independent claim 1 allowable in its present form, it follows that claims 4 and 5, that depend therefrom, also are allowable.

### Objections

The Examiner has objected to claims 2 and 3 as being based on rejected base claims. The Examiner has noted that claims 2 and 3 would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim.

In view of the discussion above in the context of the § 103(a) rejections, Applicant submits that the base claims from which claims 2 and 3 depend are allowable, making claims 2 and 3 allowable in their present form.

In view of the above remarks it is respectfully submitted that independent claims 1 and 6, and hence dependent claims 2-5 and 7-23 are in condition for allowance. Prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,

**DRAFT**

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